



Service Information Letter - Fuel Systems

**SUBJECT: Service Information for RSA-10ED1 Fuel Injection Servo
Parts List 2576546-3.**

PURPOSE: To provide repair shops with flow bench limits and service information for RSA-10ED1 fuel injection servo parts list 2576546-3.

Revision 2 adds information for the -3 configuration.

Revision 1 adds information for the -2 configuration.

- A. **EFFECTIVITY:** This Service Information Letter is applicable to all RSA-10ED1 fuel injection servos, parts list 2576546-3. These servos are installed on Lycoming IO-540-AC1A5 engines.
- B. **REASON:** This servo was released for installation on the new Cessna 206.
- C. **COMPLIANCE:** Information only.
- D. **DESCRIPTION:** This document supercedes SIL RS-47, and SIL RS-47 Revision 1. The service information found in manual 15-458G for parts list 2524273-12 is applicable to parts list 2576546-3 except as follows:

- 1. Reference manual 15-458G, IPL, Figure 1:

Item Number	2576546-3 Part Number	Description
1	2576546-3	Fuel Injection Servo
30	2537846	Adapter, Pressure gauge
36A	392522	Plug, Pipe
45	2520672	Lever, Mixture Control
50	2522710	Outlet Fitting
51	557-S-4	Packing, Preformed
52	82887	Shipping Cap
55	951789	Packing, Preformed
80	2542856	Lever, Throttle
85	2529453	Adapter, Fuel Inlet (90° bulkhead)
86	2575904	Nut, Flared Tube
115	2576545-B	Fuel Injection Servo, Basic

2. Reference manual 15-458G, IPL, Figure 3:

Item Number	2576546-3 Part Number	Description
180	2577201-1330	Valve, Lower Idle

3. Reference manual 15-458G, IPL, Figure 4:

Item Number	2576546-3 Part Number	Description
160	2523966	Body Assembly, Main

4. Reference manual 15-458G, Calibration and Service Limits:

Specification Type	2576546-3 Test Specification
Calibration Limits	30078-03
Service Limits	30079-01

These Specifications are included with this service information letter; see pages 3 & 4.

5. Reference manual 15-458G, History of Changes.

<u>Date</u>	<u>IC Number</u>	<u>Description</u>
<u>Issue 1</u>		
09-23-98	1	Released to production.
10-01-98	2	Calibration Revision
10-22-98	3	Idle Lever Assembly 2538396 was 2577097
12-11-98	4	Calibration Revision
08-04-99	4T	Idle Valve 2577098 revised (now marked 2577098T).
10-18-99	4TA	Calibration Revision
11-05-01	5	Same as IC 4TA
<u>Issue 2</u>		
02-22-02	5	Alternate Inlet Plug 2537846 was 2538890, Added 392522 Plug.
<u>Issue 3</u>		
08-10-04	6	Lower Idle Valve 2577201-1330 was 2577098

30078-03
11/14/01

**TEST SPECIFICATION
CALIBRATION LIMITS**
PRECISION AIRMOTIVE CORPORATION - FUEL CONTROLS - MARYSVILLE, WASHINGTON

INSTALLATION PARTS LIST: _____ MODEL: RSA-10ED1 SERIAL NUMBER: _____

OPERATOR: _____ DATE: _____

BASIC PARTS LISTS: 2576545 FUEL PRESSURE: 26 ± 1 PSI FUEL SP. GRAV. _____ @ _____ °F

TEST POINT NUMBER	1	2	3	4	5
METERING SUCTION (INCHES OF WATER)	0	0	1.7	5.4	22.3
CORRESPONDING AIRFLOW (LBS/HR)	0	0	550	1000	2000
MIXTURE CONTROL POSITION	RICH	ICO	RICH	RICH	RICH
THROTTLE POSITION	W/O	W/O	W/O	W/O	W/O
FLOWMETER LIMITS					
MINIMUM OBSERVED (LBS/HR)	30.0	0	56.0	97.0	198.0
MAXIMUM OBSERVED (LBS/HR)	36.5	5 cc/min	60.0	103.0	205.0
BURETTE TIME LIMITS (Using MIL-C-7024 Type II, STODDARD)					
MINIMUM OBSERVED (SECONDS)	200	30.5	300	500	2000
MAXIMUM OBSERVED (SECONDS)	33.4	32.7	29.6	31.5	59.5
METERING HEAD AVG OBSERVED (" STODDARD)					
MINIMUM OBSERVED (" STODDARD)	1.0	3.3	12.2	61.6	51.0

PROCEDURE FOR SPLIT HEAD CHECK

1. Close throttle to .006" shim in bore.
2. Adjust idle fuel flow to 5 -6 lbs/hr with wheel centered. Observe metering head. Energize boost pump to provide 35 - 40 psi. After stabilizing, fuel flow must be within ± .5 lbs/hr of value observed at specified fuel inlet pressure. Turn boost pump off.
3. Remove .006" shim.
4. Close throttle so that fuel is less than 4 lbs/hr. Observe metering head. Metering head shall be no more than 5" above value observed in step 2.

30079-01
11/14/01

TEST SPECIFICATION
SERVICE LIMITS
PRECISION AIRMOTIVE CORPORATION - FUEL CONTROLS - MARYSVILLE, WASHINGTON

INSTALLATION PARTS LIST: _____ MODEL: RSA-10ED1 SERIAL NUMBER: _____

OPERATOR: _____ DATE: _____

BASIC PARTS LIST: 2576545 FUEL PRESSURE: 25-27 PSI FUEL SP. GRAV. @ _____ °F

TEST POINT NUMBER	1	2	3	4	5
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METERING SUCTION (INCHES OF WATER)	0	0	1.7	5.4	22.3
CORRESPONDING AIRFLOW (LBS/HR)	0	0	550	1000	2000
MIXTURE CONTROL POSITION	RICH	ICO	RICH	RICH	RICH
THROTTLE POSITION	W/O	W/O	W/O	W/O	W/O

FLOWMETER LIMITS

MINIMUM	28.0	0	54.0	95.0	196.0
OBSERVED (LBS/HR)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
MAXIMUM	38.5	5 cc/min	62.0	105.0	207.0

BURETTE TIME LIMITS (Using MIL-C-7024 Type II STODDARD)

<u>BURETTE VOLUME (cc)</u>	200	300	500	2000
MINIMUM	31.7	29.5	29.1	59.0
OBSERVED (SECONDS)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
MAXIMUM	43.6	33.9	32.1	62.3
<u>METERING HEAD AVG</u>	1.0	3.3	12.2	51.0
OBSERVED (" STODDARD)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>